

INTERMEDIATE DIAPHRAGM SIZING TABLE	
BEAM DEPTH	RECOMMENDED SIZE
24" TO 45"	W 14 x 99
48" TO 54"	MC 18 x 42.7
STEEL SHAPES SHOWN IN THE DIAPHRAGM SIZING TABLE AND DETAILS ARE RECOMMENDED. ALL DIAPHRAGMS MUST BE DESIGNED.	

END DIAPHRAGM SIZING TABLE	
BEAM DEPTH	RECOMMENDED SIZE
24" TO 39"	W 14 x 99
42" TO 45"	W 18 x 86
48" TO 54"	W 24 x 76
STEEL SHAPES SHOWN IN THE DIAPHRAGM SIZING TABLE AND DETAILS ARE RECOMMENDED. ALL DIAPHRAGMS MUST BE DESIGNED.	

DESIGNER NOTE:

THE NUMBER OF BOLTS AND INSERTS AT THE CONNECTIONS MUST BE DESIGNED.

* INSERT SHOULD BE ADJUSTED TO AVOID INTERFERENCE WITH PRESTRESSING STRANDS.

NOTES:

ALL STEEL SHALL BE INCLUDED IN THE PRICE BID FOR THE BEAM ITEM.

INTERMEDIATE AND END DIAPHRAGMS SHALL BE FABRICATED WITH THEIR ENDS VERTICAL.

ALL HOLES IN STEEL ADJACENT TO STEEL INSERTS AND FORMED HOLES ARE RECOMMENDED TO BE FIELD DRILLED.

ALL CONNECTIONS BETWEEN STEEL ELEMENTS SHALL BE MADE ACCORDING TO THE NEW YORK STATE STEEL CONSTRUCTION MANUAL.

THE CONTRACTOR MAY PLACE DIAPHRAGMS ON EITHER SIDE OF THE CONNECTION PLATES AS NECESSARY TO CORRECT ALIGNMENT PROVIDED THERE WILL BE NO INTERFERENCE WITH OTHER STRUCTURAL DETAILS.

TAPERED OR FLAT SHIM PLATES MAY BE USED IN THE CONNECTION BETWEEN SKEWED DIAPHRAGMS AND THE CONNECTION PLATES. VARIABLE THICKNESSES OF SHIM PLATES MAY BE USED. THE MINIMUM THICKNESS OF SHIM PLATE SHALL BE 1/8" WITH A MAXIMUM NUMBER OF THREE SHIM PLATES PERMITTED AT ANY CONNECTION. THE TOTAL THICKNESS OF ALL SHIM PLATES USED AT ANY CONNECTION SHALL NOT EXCEED 1". SHIM PLATES SHALL HAVE THE DIMENSIONS OF THE FAYING SURFACE. THE SHIM MATERIAL SHALL CONFORM TO ASTM DESIGNATION A709 PAYMENT WILL BE MADE FOR FURNISHING AND PLACING THE SHIM PLATES.

THREADED INSERTS FOR 7/8" DIA. BOLTS SHALL BE CAST INTO THE PRECAST BEAMS, AND SHALL PROVIDE A MINIMUM ULTIMATE TENSILE CAPACITY OF 11 kips IN 7.5 ksi CONCRETE.

ALL INSERTS SHALL BE GALVANIZED IN ACCORDANCE WITH THE N.Y.S. STD. SPECIFICATIONS SUBSECTION 719-01.

THREADED INSERTS IN BEAMS SHALL BE MECHANICAL CONNECTORS, MEETING THE REQUIREMENTS OF ITEM 709-10.

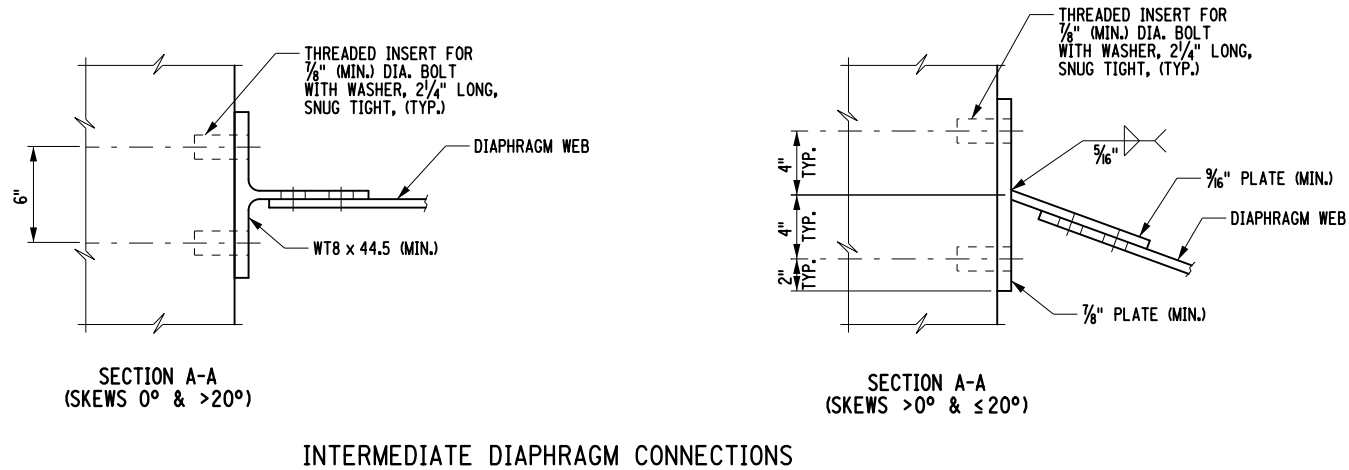
ALL STEEL SHALL BE ASTM A709 GRADE 50 AND BE GALVANIZED IN ACCORDANCE WITH THE N.Y.S. STD. SPECIFICATIONS SUBSECTIONS 719-01.

STEEL TO STEEL CONNECTIONS SHALL BE MADE USING ASTM 7/8" A325 TYPE 1 BOLTS.

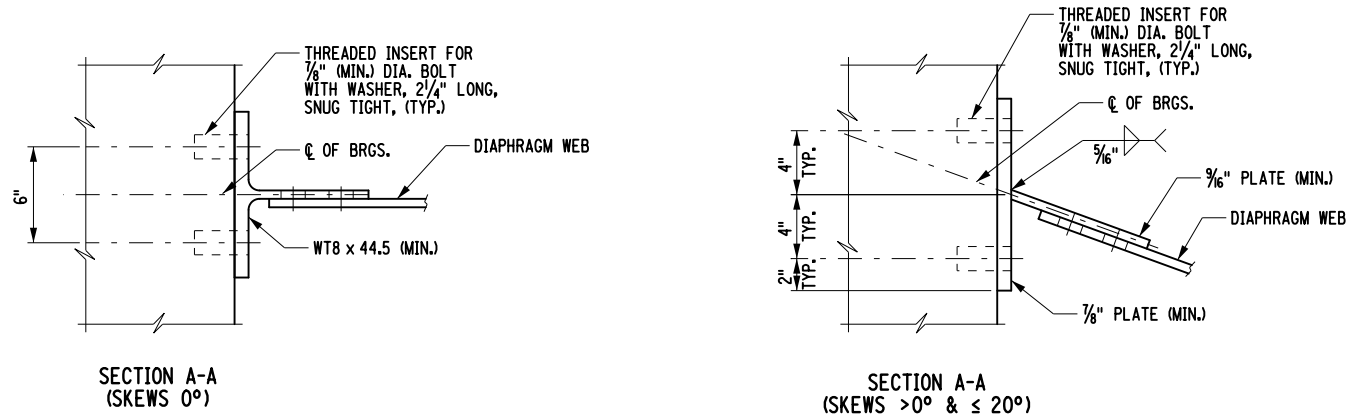
BOLTS TO BE USED WITH INSERTS SHALL BE ASTM A325 TYPE 1 AND SNUG TIGHT.

ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH N.Y.S. STANDARD SPECIFICATIONS SUBSECTION 719-01.

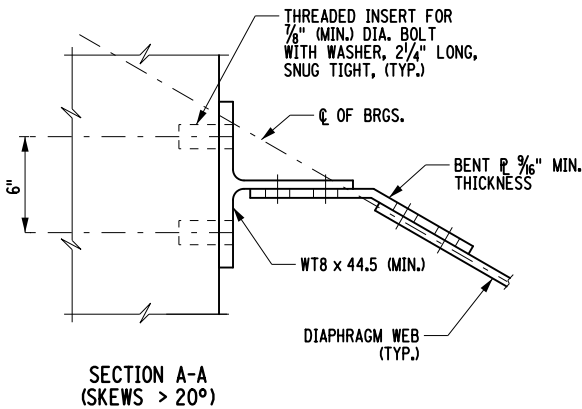
WASHERS SHALL BE ASTM F436.




INTERMEDIATE DIAPHRAGM CONNECTIONS



END DIAPHRAGM CONNECTIONS



REVISED	 <div>NEW YORK STATE OF OPPORTUNITY.</div>	Department of Transportation Office of Structures	
	PRESTRESSED CONCRETE SPREAD BOX BEAM STEEL DIAPHRAGM DETAILS		
ERRATA			
	APPROVED: 02/17/17 ORIGINAL SIGNED BY <u>RICHARD MARCHIONE, P.E.</u> DEPUTY CHIEF ENGINEER (STRUCTURES)		ISSUED UNDER EB 17-010 EFFECTIVE WITH THE LETTING OF 09/01/17